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(72) Inventor: Ishikawa, Masaaki

Yokohama-shi, Kanagwa (JP)

(74) Representative:

Schwabe - Sandmair - Marx

Stuntzstrasse 16

81677 München (DE)

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(71) Applicant: Ricoh Company, Ltd.

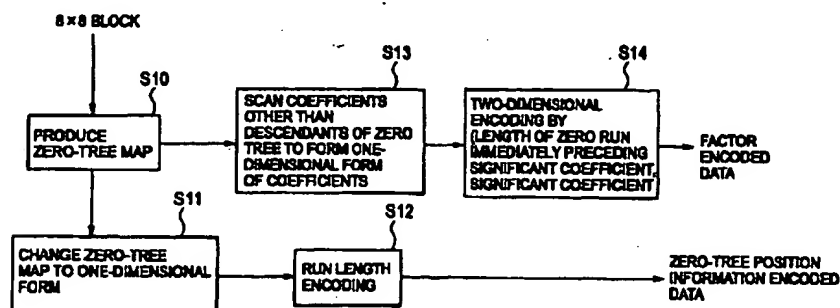
Tokyo 143-8555 (JP)

(54) Method for encoding wavelet coefficients

(57) A method for encoding wavelet coefficients can achieve a high compression ratio for image data. The image data is converted and quantized into coefficients by a two-dimensional wavelet transform and the coefficients having the same spatial position are collected to form a block. A layered quad-tree structure of the coefficients included in each block is defined with respect to each of a set of coefficients representing a vertical component (LH), a set of coefficients representing a horizontal component (HL) and a set of coefficients representing a diagonal component (HH). Each quad-tree structure has a root corresponding to a coefficient

of a lowest frequency band. A zero tree of which all descendant nodes lack a significant coefficient is searched for, and positional information of the zero tree is encoded. The coefficients other than descendants of the zero-tree are scanned so as to form a one-dimensional coefficient string of the scanned coefficients. The one-dimensional coefficient string is encoded according to a two-dimensional encoding method using a run length of a zero run immediately preceding a significant coefficient and a significant coefficient.

FIG.9



EP 0 926 896 A2